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ABSTRACT

Designed for the regular and orderly reporting of information and developments related to specialized school government as a system for accomplishing public educational purposes, the "Journal on State School Systems Development" includes reports of State and Federal legislative action, program implications, special projects, and research findings as well as discussions of intergovernmental relations and specific issues. The journal serves as a source of information for persons interested in school government, its objectives, and its productivity. The Fall 1967, Vol. 1, No. 3 issue consists of articles entitled: (1) "Iowa's Pattern for Area Vocational and Community College Education"; (2) "The Regional Education Service Centers in Texas"; (3) "Process and Product in School Consolidation"; and (4) "What Does Research Say About the Size of a Local School District?" (NQ)

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Journal on STATE SCHOOL SYSTEMS DEVELOPMENT

FALL 1967 ■ VOLUME 1 NUMBER 3

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Journal on
State
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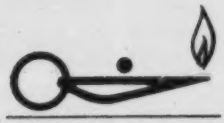

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The editors express deep appreciation to Dr. Charles O. Fitzwater who gave special assistance in the preparation of this issue.

IOWA'S PATTERN

For Area Vocational and Community College Education

David H. Bechtel

OVER THE PAST few years Iowa has experienced significant success in gaining sound legislation for the development of comprehensive post high school programs of less than the four-year degree level. The efforts to achieve this educational structure have not always appeared to have had a chance for success, yet within a period of a few years, a structure for area vocational and community college education has developed with a sufficient degree of success that other states working for similar programs might want to take a look at Iowa's new pattern.

A review of this development to the present status, with some description of the diverse, yet related factors, that culminated in the passage of Iowa's present legal structure for area schools, is outlined herewith.

HISTORY

The Gibson Report

In 1959, during the Fifty-Eighth General Assembly of the Iowa Legislature, it became apparent that there were many problems associated with post high school and higher education which demanded attention and action by the state legislature. Lacking, however, was the necessary basic information pertaining to these subject areas, without which intelligent decisions

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could not be made. As a result, money was appropriated by the legislature to the Legislative Research Bureau to allow for a comprehensive study on the needs of higher education in Iowa. The Bureau employed Dr. Raymond C. Gibson, Professor of Higher Education at Indiana University, to direct the project.

Gibson spent the two-year interim period between the legislative sessions conducting his research and was ready with a four-volume report plus a summary by the time the Fifty-Ninth General Assembly convened.

One volume dealt specifically with the development of a junior college system in Iowa. The first post high school program was established in 1918 although there was no legal recognition for such programs at that time. In 1927, Iowa passed the first legislation which enabled a local school district board, upon approval of the state superintendent and authorization of the district voters, to establish and maintain a junior college.

Financial support, in those early days, came primarily from local taxation and student tuition, but in 1949 the legislature provided state aid equivalent to 25¢ a day per student enrolled for 12 or more hours of course work. This state aid was increased to $1 a day per student in 1957 and in 1961 it was increased to $1.50 per day per student to support the out-of-district students.

By the 1961-62 school year, 16 public two-year community-junior colleges were being operated by local boards of education already carrying responsibility for the K-12 programs. The 16 junior colleges, at that time, combined a full-time enrollment of 3,766 students. The enrollment ranged from 80 in one college to 627 in another with an average of 236 students per institution. This exiguous enrollment was the result of establishing the colleges in small communities; only 3 of the 16 colleges were located in cities with a population of over thirty thousand, and not one was located in Iowa's seven most populous counties. Nine colleges were clustered in the north central part of the state and served roughly a 20-county area. The remaining seven were distributed primarily along the southern and southeastern boundaries of the state. While Figure I on page 147 depicts the geographical pattern and enrollments for the school year 1965-66, the same distribution was in effect during the 1961-62 school year.

Based upon his findings, Gibson made the following recommendations:

1. Estherville, 486
2. Emmetsburg, 146
3. Mason City, 1535
4. Eagle Grove, 187
5. Fort Dodge, 865
6. Webster City, 252
7. Ellsworth, 830
8. Boone, 285
9. Marshalltown, 867
10. Clarinda, 491
11. Creston, 311
12. Centerville, 516
13. Clinton, 555
14. Muscatine, 663
15. Burlington, 763
16. Keokuk, 346

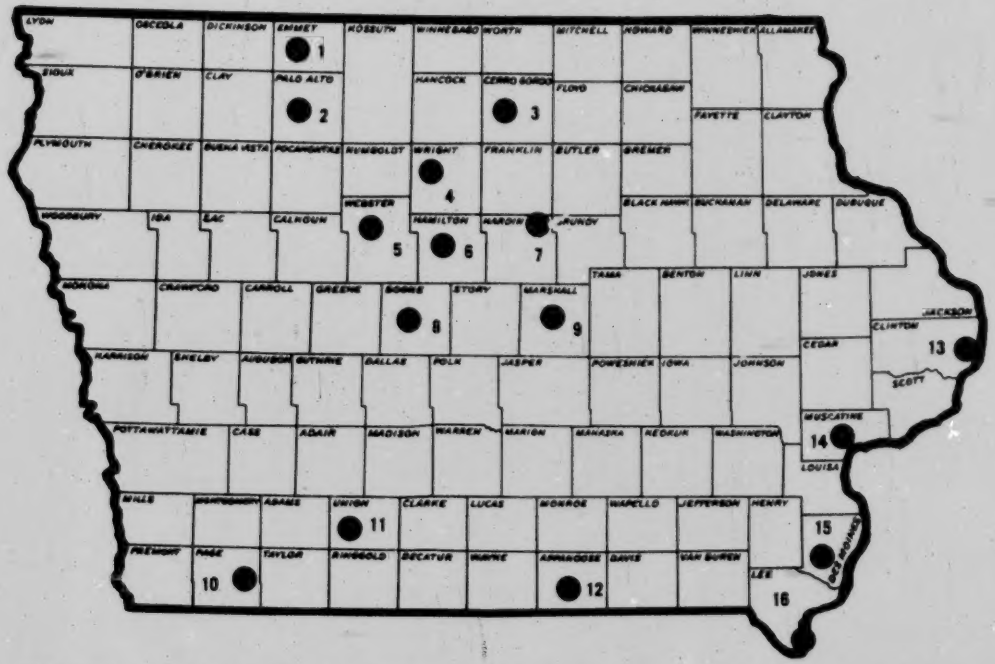

FIGURE I—IOWA PUBLIC JUNIOR COLLEGES AND ENROLLMENTS, 1965-66

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1. The state legislature should authorize the establishment of regional community colleges as the best means of relating education beyond high school to the manpower problem in Iowa.
2. The state legislature should authorize the establishment of regional community colleges in areas which assure an enrollment of five hundred students and the state should pay at least one-half the cost for building and operating such colleges.

While Gibson strongly recommended that Iowa develop a new system for post high school education in the state, he made no recommendations indicating how such a system should be structured. In addition, the Fifty-Ninth General Assembly had insufficient time to take any action. However, as a result of Gibson's recommendations, the legislature authorized the Department of Public Instruction to conduct a study for a statewide plan for the development of public area and community colleges. The legislature further indicated, as part of the study, that the Department investigate the availability and quality of vocational and technical education in Iowa high schools and make recommendations as to how these programs might be improved and made available to more of Iowa's youths and adults.

The State Department Takes the Lead

In receiving this directive to study education programs at the post high school level, the Department proceeded on two basic assumptions: first, the recognition that the 16 community-junior colleges then operating in the state were not adequate to handle extensive terminal vocational or technical education programs within the present structure; and second, that the legislature was interested in providing quality vocational and technical education programs at the high school level as well as at the post high school level to include adults.

In addition to specific recommendations from the legislature, the study committee of the Department conducted its work with the following premises as additional guides:

1. That public area community colleges be developed to function within the pattern of the administrative structure of the public school system
2. That a regional education area, created and authorized to establish a public area community college, be of sufficient

size to provide the human and financial resources necessary to maintain an adequate educational and service program, and that all such areas be formed without the creation of additional legal taxing units

3. That quality education, especially in occupation-centered curriculums, requires a high level of financial support
4. That an area community college be located within one hour's driving time of the majority of its students but that the college be of sufficient size to offer a broad educational program at an economical cost, recognizing that the location of the central campus unavoidably may be beyond the optimum commuting distance for some students.

In December 1962, the Department completed its two-year study and submitted to the General Assembly the report entitled *Education Beyond High-School Age: The Community College.* Suggested legislation by the Department staff for implementing recommendations was submitted to the General Assembly along with the report. While proposing the legal framework for the development of area community colleges was recognized as the main intent of the legislature, the report was not limited only to this phase of Iowa's public education system. The Department was concerned also with the additional problem of restructuring the state's county intermediate districts. The Iowa Association of County Superintendents requested the Department to establish boundary lines to be incorporated into legislation for redistricting Iowa's 99 counties into fewer yet more effective intermediate units of school administration.

In researching the problems associated with establishing the area community colleges and in attempting to redistrict the boundary lines of the present county school system so as to provide more effective intermediate units, the Department found that both proposals had certain basic elements in common relating to organization. Each required defining specific areas or regions of the state from which financial support could be obtained. Each required that in defining such areas, basic criteria be established to insure that each area had the potential human and financial capacity to fulfill its educational intent. Each required that the area elect a lay board with responsibility for and control of the educational program. Each required that this board appoint an administrative officer to carry out the desired educational functions. In studying these similarities, the Department concluded

that both these educational functions be performed within the same area unit, with one elected board, and that one executive officer be responsible for both programs. It was recognized that to combine these two programs could bring about considerable dissatisfaction within the lay and educational leadership, but the Department had the obligation to keep all aspects of public education in perspective and not promote one phase or level of the system to the neglect of the other. There was no evidence also to indicate that the people of Iowa were willing to create a separate tax base for each of these proposals and thus introduce an additional educational taxing unit into the state.

To provide both these functions, the Department proposed that the legislature create 16 areas encompassing the state. The boundaries of these areas were drawn along existing school district lines with the provisions that adjustments could be made as school district reorganization progressed in the state. Figure II on page 151 shows a map with the original boundary designations.

Each of the proposed area education districts was defined by applying the minimum criteria that insured adequate human and financial potential to permit the economic operation of both the intermediate unit and the community college. These criteria included:

1. Recognition of the cultural, social, and economic characteristics in an area
2. The feasibility of an administrative structure for the area community college with an attendance center, or centers, located within one hour's driving time of the majority of the students to be served
3. A minimum area school enrollment of 5,000 public and private students in grades 9-12
4. A minimum assessed taxable valuation of $150,000,000.

Initially, it was proposed that each area education district would provide, with the approval and cooperation of the local school districts, complementary services to supplement and support their programs more efficiently and effectively. It was hoped that the proposed 16 areas would eventually assume the role of the 99-county intermediate districts.

Each area would serve also as the legal structure through which a statewide system of area community colleges would be developed. These colleges would be established only after the

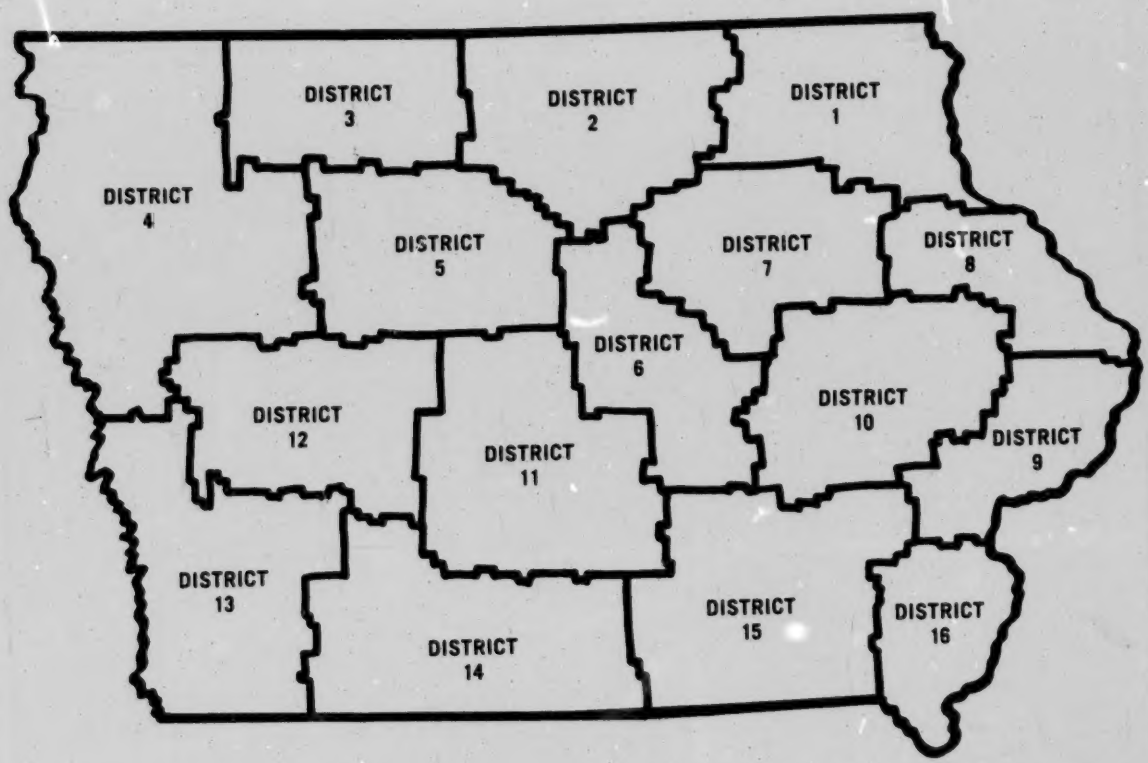

FIGURE II—PROPOSED 16 DISTRICTS FOR COMBINED AREA COMMUNITY COLLEGES AND INTERMEDIATE UNITS

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people in each area had studied and recognized the post high school educational needs and then voted to establish the area education district. It was recommended that where area community colleges were established, the financing for capital outlay would be provided from an areawide property tax. Operational costs for the program would be shared by area education districts and the state, in proportions to be determined by the legislature. An area district was given additional authority to assess tuition charges if it desired to do so.

The Reaction of the General Assembly

This tremendous effort was doomed. The reasons for legislative inaction, upon reflection, seem obvious. First, the proposal called for a significant restructuring of many provisions in the existing Iowa Code. Such major changes seldom are achieved in a single session. Second, the proposal affected many existing educational structures—structures for county intermediate district services, for junior colleges, and for vocational education programs. Its most unappealing aspect, however, was the call for mandated redistricting throughout the state which would have established a new educational structure. Because the proposal did not suggest a permissive approach to solving the problem, it would have required the General Assembly to make decisions on specific boundaries and areas, and this has little appeal for any legislator.

It was not surprising therefore, that though a bill had been drafted, and copies provided for each member of the legislature, no legislator introduced the bill into the General Assembly and no member of the study committee was requested to appear before any legislative committee or subcommittee to review the proposal. It died a silent death.

Preparation for the Second Legislative Effort

All was not lost, however. The idea of area education districts seemed to take hold with some legislators. What was needed was an acceptable approach. Believing that further study might open new doors, the General Assembly appointed an interim committee of legislators to give continued study to the problems of providing vocational educational programs. The concept of combining vocational programs with the two-year colleges at first was rejected, but, as a result of further study, support grew for the initial concept. However, it was decided

that a permissive approach would be the channel through which this concept should develop.

With the passage of the 1963 Vocational Education Act, considerable impetus was given to the efforts of the interim committee, and as a result of their study they reached the following conclusions:

1. The area vocational education schools and the two-year community colleges should be joined in a single comprehensive institution.
2. An area approach was necessary to obtain sufficient enrollment and adequate fiscal support.
3. The post high school program should not be state operated but should have its own area board with the authority to appoint an administrative officer. Significant state funds should be made available for operation and capital outlay.
4. Methods should be devised to encourage permissive development of these institutions.
5. Problems associated with the development of the comprehensive area schools should remain separate from problems of merging the county intermediate districts.

During the study by the Interim Committee, the Department of Public Instruction continued a close relationship with the groups and associations representing the established two-year colleges, the vocational programs, and the county intermediate districts. These groups strongly opposed the mandated approach. They agreed too that legislation in regard to restructuring the county intermediate district should be separate from legislation for the comprehensive area education programs. But there was considerable reluctance on the part of those involved with the two-year junior colleges and those responsible with area vocational education to communicate on the Interim Committee's recommendation that the community colleges and the vocational schools be joined in one comprehensive institution. This problem was intensified further by the emphasis given to vocational education with the passage of the 1963 Vocational Education Act. Cautious tolerance might be the best term to use in describing the attitude of these distinct forces in regard to the development of the area programs.

There were also a number of lay groups that for various reasons wanted some restructuring of the educational system. The

initial report by the Department to the General Assembly, while not debated in the Assembly, did serve as the vehicle for discussion and action by these lay groups. Regardless of specific goals or interests, there was little doubt that support for the area approach to education received a significant boost as a result of these discussions.

Another unforeseen boost came about through a change in political control in the Assembly. While the 1963 Assembly was split politically, the 1965 legislative session functioned with the same party having majority control in both houses. This gave more assurance to passage of legislation when it gained the support of the party in control.

Legislative Provisions Enacted for Area Schools

As a result of the interim two-year study—after all concerned had the opportunity to state their views and to make their recommendations, when all the facts were brought together, and studied, sifted, and evaluated, legislation was then introduced into the 61st General Assembly. The chances for strong support were good because time had been taken to cover all bases.

As anticipated, the legislature kept separate the establishment of the area schools from the concept of the multicounty intermediate unit and in doing so, passed a separate bill to permit counties to merge in order to create enlarged intermediate units. The legislature also withstood pressure to permit the establishment of a state operated system for the area vocational and community colleges which would have fallen under the direction of a separate state board created for that purpose.

The bill as enacted (Senate File 550, Acts of the Iowa 61st General Assembly which became Chapter 280A, Code of Iowa) carried the following statement of legislative intent:

> It is hereby declared to be the policy of the state of Iowa and the purpose of this Act to provide for the establishment of not more than twenty (20) areas which shall include all of the area of the state and which may operate either area vocational schools or area community colleges offering to the greatest extent possible educational opportunities and services in each of the following, when applicable, but not necessarily limited to:
>
> 1. The first two years of college work including prepro-

fessional education
2. Vocational and technical training
3. Programs for high school completion for students of post high school age
4. Programs for all students of high school age who may best serve themselves by enrolling for vocational and technical training while also enrolled in a local high school—public or private
5. Student personnel services
6. Community services
7. Vocational education for persons who have academic, socioeconomic, or other handicaps which prevent succeeding in regular vocational education programs
8. Training, retraining, and all necessary preparation for productive employment of all citizens.

The Act further defined the vocational school and community college as follows:

> Vocational school means a publicly supported school which offers as its curriculum or part of its curriculum vocational or technical education, training or retraining available to persons who have completed or left high school and are preparing to enter the labor market; persons who are attending high school who will benefit from such education or training but who do not have the necessary facilities available in the local high schools; persons who have entered the labor market but are in need of upgrading or learning skills; and persons who, due to academic, socioeconomic, or other handicaps, are prevented from succeeding in regular vocational or technical education programs.
>
> Community college means a publicly supported school which meets the curriculum requirements of a junior college and which offers in whole or in part the curriculum of a vocational school.

The major provisions for establishing a statewide pattern of area education districts are as follows:

1. Provides for, by concurrent action of the concerned county boards, the merger of total or partial county school systems into a new body politic as a school corporation for the speci-

fic purpose of operating an area vocational school or an area community college.

2. Designates to the State Board of Public Instruction the responsibility for receiving and approving, or rejecting, all proposals for such merger action so as to carry out the policy of the state that not more than 20 such areas, including all the territory of the state, be established for operating area vocational schools or area community colleges.
3. Sets forth the criteria by which a proposed merged area may formulate a plan for submission to the State Board.
4. Provides for the creation and election of a board of directors, elected from elector districts within the area, to administer the area vocational school or community college.
5. Authorizes the board of directors to levy a tax on the property of the merged area not to exceed three-quarters mill for operational costs. Also authorizes, by vote of the people, an additional "site levy tax" not to exceed three-quarters mill in any one year for the purchase of grounds, construction of buildings, payment of debts contracted for construction of buildings, purchase of and equipment for buildings, and the acquisition of libraries. Such a three-quarter mill levy cannot be authorized for a period to exceed five years without being revoted. The board of directors, when authorized by a vote of the people of the area, may also acquire sites and erect and equip buildings and may contract indebtedness and issue bonds to raise funds for such purposes.
6. Creates the payment, for residents of the state, of general school aid funds determined on the basis of $2.25 a day calculated on the average daily enrollment of full-time and full-time equivalent students.
7. Makes allowances for the charging of tuition and the acceptance of additional state and federal funds allocated for the construction or operation of area vocational schools or area community colleges.
8. Provides for the continued operation of existing community-junior colleges supported by the tax base of a single school district and also established an equitable means for the transfer, and reimbursement, for such facilities to the merged board of directors where such action is desired.

9. Creates the establishment and provisions for enforcement of approval standards for area community and junior colleges and area vocational schools.
10. Establishes a division of community and junior colleges within the State Department of Public Instruction and creates an advisory committee to the State Board of Public Instruction, parallel to the already established advisory committee on vocational education, for public and area community or junior colleges.

The finance pattern for these institutions incorporates the use of area, state, and federal funds, as well as student tuition. Three procedures for raising revenue are available to area boards of education:

—They may levy a tax not to exceed three-quarters mill on the property of the area for operational costs without a referendum.

—They may levy an additional three-quarter mill tax for site purchase and capital improvements upon a simple majority vote of the people for a period up to five years before revoting.

—They may use the same bonding provisions as are available to local school districts in Iowa with a total indebtedness not to exceed five percent of the actual valuation of property of the area education district which may be retired at a levy not to exceed ten mills.

By paying $2.25 per day aid for full-time and full-time equivalent enrolled students who are carrying 12 or more semester hours of work, the state will carry a major portion of the financing. This will be calculated on the full 12-month operation which will be characteristic of the area schools. The state also may make the necessary specific appropriations for capital outlay. While an institution is permitted to charge tuition fees, the intent of the law is to keep such a source of revenue to a minimum.

BREAKTHROUGH TO DEVELOPMENT

Early Success

Action came quickly. The new law became effective July 4, 1965, and on July 5, the next day, the State Board received the first formal proposal from an area composed of all or parts of seven counties in the state. This proposal had been developed in

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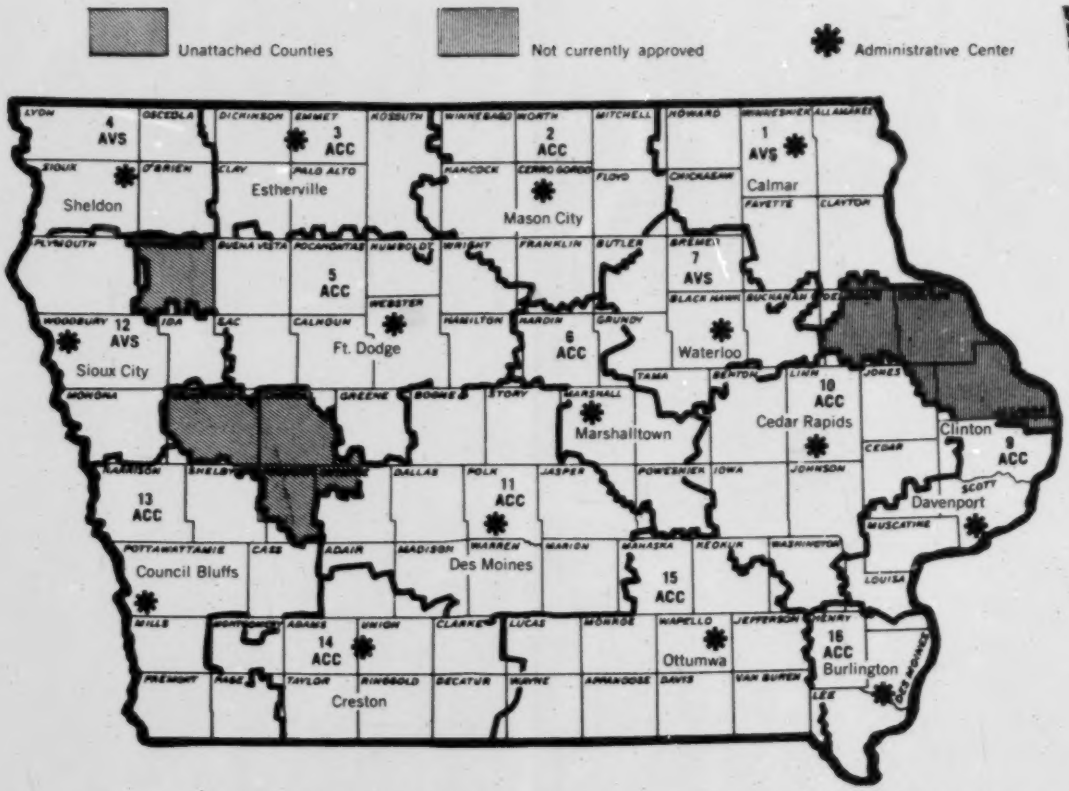

FIGURE III—AREA COMMUNITY COLLEGES AND AREA VOCATIONAL SCHOOLS SHOWING ADMINISTRATIVE CENTERS

TABLE 1

AREA	PROGRAM AND LOCATION	DATE ORGANIZED	VALUATION	PUBLIC AND PRIVATE ENROLLMENT GRADES 9-12
I	Northeast Iowa Area Vocational School, Calmar	May 2, 1966	$230,392,835	30,131
II	North Iowa Community College, Mason City	May 3, 1966	$364,560,216	36,541
III	Iowa Lakes Community College, Estherville	January 12, 1967	$248,025,160	23,362
IV	Northwest Iowa Area Vocational School, Sheldon	April 27, 1966	$182,455,909	19,151
V	Iowa Central Community College, Fort Dodge	April 25, 1966	$482,990,596	46,920
VI	Community College, Marshalltown	July 7, 1966	$252,386,112	25,102
VII	Hawkeye Institute of Technology, Waterloo	May 25, 1966	$405,798,775	54,676
VIII	(Unorganized)			
IX	Eastern Iowa Community College, Bettendorf	March 18, 1966	$443,55?,773	62,336
X	Community College, Cedar Rapids	May 18, 1966	$608,110,704	77,688
XI	Community College, Ankeny	April 23, 1966	$916,843,576	122,214
XII	Western Iowa Tech, Sioux City	December 8, 1966	$304,349,562	41,231
XIII	Iowa Western Community College, Council Bluffs	May 26, 1966	$382,094,327	47,268
XIV	Southwestern Community College, Creston	April 24, 1966	$183,884,473	17,426
XV	Iowa Technical Institute, Ottumwa	April 22, 1966	$301,101,076	37,162
XVI	Southeastern Iowa College, Burlington	July 26, 1966	$207,402,615	29,109

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anticipation of the passage of such legislation. Those responsible for its preparation had guessed correctly as to the final form of the bill. Another proposal involving all or parts of 10 counties had been submitted earlier. Because of an incorrect assumption that the Act provided for the cooperation of local school districts to form an area education district, the proposal could not be accepted and was returned for revision.

By July 1966, one year later, all counties in the state had participated in some form of study or planning for the development of an area vocational school or area community college. As a result of these planning studies, 13 area schools were formed. Of these 13, four were approved as area vocational schools and nine as area community colleges. These 13 area schools encompass 83 of Iowa's 99 counties.

By July 1966, all but three of Iowa's junior colleges under the jurisdiction of a local school district board of education had transferred or were in the process of being transferred to the area education district administration.

The boards of nine of the 13 area education districts, established within the first year, asked the citizens to vote for the three-quarter mill levy for site acquisition and development. In all nine districts, the proposition was approved.

Six million dollars for construction of vocational facilities was appropriated for the biennium by the 1965 General Assembly, and was distributed to seven of the area education districts established. In addition, $2,400,000 for each year of the biennium was appropriated for the development and operation of vocational programs. This was in addition to the $2.25 per day for full-time and full-time equivalent students appropriated as general state aid.

Even the most severe critic of the various proposals for the development of such a new system could come to no other conclusion than once the people of Iowa were given the opportunity, they were ready to move ahead.

Update

Figure III shows a map of the area education districts on page 158 with an explanatory table below. There are now 15 area districts in operation—four as area vocational schools, and eleven community colleges. Seven counties remain outside the program but one of these counties recently requested inclusion in an exist-

ing area district. To date, approval has not been granted.

Ten of the area districts have had their sites (ranging from 105 to 406 acres in size) approved by the State Board of Public Instruction. The remaining five are in various stages of site acquisition and, in the meantime, are operating in rented facilities.

Two area districts that received part of the $6 million of state funds for the construction of vocational facilities are in the final stages of their initial building programs. Twelve area districts have employed an architect and are planning facilities.

The transition into the area districts of the 16 two-year junior colleges is progressing. Those that have not completed the transfer are working in some form of contractual agreement with the area district. This still remains a highly complex problem in some areas because of the existence of previously constructed facilities owned by the local school district boards of education.

In September of this year, five more area districts presented to the voters the three-quarter mill levy for site acquisition and development. Four of the five approved the proposition.

The enrollment projections for these institutions for the coming school year are set at over 18,500 full-time equivalent students. In terms of individual enrollments, many of which are part-time, this amounts to approximately 55,500 youth and adults.

The 1967 General Assembly also increased the state appropriations for these schools. An additional $9,500,000 above the $6 million allocated in 1965 was allocated for the construction of vocational facilities. Funds were increased also for the initiation and continued operation of vocational programs from $2,400,000 to $6 million for each year of the biennium with an additional $6 million appropriated for each year of the biennium to pay the general state aid as provided in the 1965 law.

The General Assembly took another significant step by making the payment of general aid possible to these schools on a current (quarterly) basis. In the past, appropriations were made at the end of the year for the previous year of operation. This caused a severe cash flow problem. To get them on a current basis, the General Assembly appropriated three years of general aid operating funds for two years of operation. This required a $4,500,000 appropriation in addition to the $6 million allocated for the first year of the biennium.

Future Outlook

While Iowa has made significant progress in the development of an administrative structure to offer comprehensive vocational and general educational opportunities, there is still a long road ahead in realistically meeting th_ increasing educational demands. The recent session of the General Assembly, while staying with the basic area school legislation developed in 1965, expressed concerns over the two years of the operation of these institutions. There was criticism of the State Board and the Department for allowing a too rapid development of area schools. There also was a concern by those having responsibilities for higher education as to possible duplication and competition for students and for funds. Those advocating more emphasis on vocational education, those wanting more general and college transfer opportunities, those with a desire for a separate Board, and those wanting a state operated program all had "their day" in the legislative debate.

But the fact that the people in 92 of Iowa's 99 counties have initiated, established, and supported these schools, and the fact that over 55,000 people are taking advantage of the educational opportunities provided by these institutions cannot be disregarded. There may be wrinkles to iron out, but with such enthusiastic support from the people of Iowa, and the desire of those responsible to improve this new system of post high school education, the direction, most certainly, will be forward.

The Regional
EDUCATION SERVICE CENTERS
In Texas

Marlin L. Brockette

THAT 20 REGIONS in Texas were designated in the spring of 1967 by the State Board of Education to function as Education Service Centers is the result of a long-time effort in Texas on the part of Texas educators, legislators, school board members, and those citizens who have strived over the years to provide quality education for Texas' children.

From the time Paul Petty and the University of Texas made the first of a series of studies in 1950 to examine intermediate district structure in Texas, followed by additional studies by the Texas County Superintendents' Association and the Texas Research League, and culminating with the major study by the Texas Education Agency in 1956, there had been a growing recognition that a regional approach to provide educational services to local school districts was needed. Though substantial reorganization has brought a decrease in the more than 2,000 local school districts during the early 1950s to the present 1,280 districts, to date less than 10 percent of the Texas school districts are large enough, in terms of pupil population, to offer the services essential to assure a full education program. Such evidence prompted the Texas Education Agency to take a new look at the educational structure with the aim of developing a plan which would assure all Texas students equal educational opportunities.

Due to responsible legislative enactment in the Texas Legislature for the years 1965 and 1967, the concept of providing pro-

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grams to function within a regional setting was given birth and nurtured. It remained for the Texas Education Agency and the State Board of Education to plan and develop the program.

The Regional Education Media Centers

The breakthrough from the traditional to an enlarged concept of intermediate area or regional functions and services came about in an unusual fashion. The 1965 law (Senate Bill 408) authorized the State Board of Education to provide for the establishment and operation of Regional Education Media Centers in accordance with prescriptions specified in the act. The function of these centers, as the name indicates, is to provide to the voluntary participating local districts the services of a materials lending library to include such media as films, tapes, recordings, programmed instructional materials and related services. The law also authorized that a professional staff be employed to assist the local districts in effective use of the materials and services provided.

According to the law, each center established by the State Board was to serve an area having a minimum of 50,000 students with exceptions made for areas of population sparsity. Each center was to be governed by a Regional Media Board composed of five or seven members, selected in accordance with regulations set by the State Board. The Regional Media Board was authorized to employ an executive director and was given the authority to prepare a budget within prescribed limits to enable the center to function. State aid was authorized to match local district funds up to $1 per pupil, beginning with the 1967-68 school year.

Thus, a new-type intermediate educational service structure was authorized, if for only one general service function. Although the intent of the legislation indicated that the state was to be ready to implement the Regional Education Media Centers by September 1967, the State Board of Education recognized that to establish such centers outside the context of other regional educational needs would be short-sighted. Meanwhile, other educational developments were taking shape which underscored the importance of the State Board's view. One of the most significant of these developments was educational planning.

In late 1965, the Texas Education Agency, along with seven other state educational agencies, launched an eight-state project funded under the Elementary and Secondary Education Act, Title 5, Section 505. This long-range educational planning project,

"Designing Education for the Future," emphasized the involvement of the educational and lay leadership in the project's activities and programs. Recognizing that educational planning is a pervasive function in which a state education agency has a key role, in 1966, the Texas Education Agency created a new position of Associate Commissioner for Educational Planning, to function directly under the State Commissioner of Education. Early the following year, the Agency joined six other states in a second multistate project also funded under ESEA, Title V, Section 505, which was designed to develop the comprehensive educational planning functions of state education agencies. These actions were taken to develop and to improve the educational planning capability within the state agencies and, also important, to develop this capability within areas of the state.

A related set of circumstances came about with the advent of Title III of ESEA which provides for supplementary education centers and programs. The Texas Education Agency recognized that this program offered unusual opportunity for improving education in the state if the funds allocated to the state were utilized effectively. Moreover, the Agency has a mandated responsibility under state law to prescribe rules and regulations by which county or local education agencies can accept federal funds. An overall state strategy was needed which would assure effective coordination of programs funded under Title III of ESEA and other educational resources. In effect, this need constituted another dimension in educational planning.

Coincidently, other kinds of statewide planning projects and activities had been started. Among these were planning studies and projects dealing with library resources, language disabilities, mental retardation, and vocational rehabilitation, which were focused on regional needs. Also, a few years earlier, a new law had created the Planning Agency Council for Texas (PACT) as a division of the Governor's staff; the Council was involved in planning various projects such as water resources development but also in setting up structures for metropolitan area planning.

The Regional Education Service Centers

In order to respond to and capitalize on these developments, the State Board sought legislation for broadening the functions of the Regional Education Media Centers. Another law was enacted in March 1967, which retained the establishment, operational procedures, and methods of financing of the 1965 law, and

provided for Regional Education Service Centers. The added functions were stated in broad terms: "to provide education services to the school districts and to coordinate educational planning in the region." Regional center boards were also empowered, according to State Board rules and regulations, to contract with and to expend grants from public and private organizations.

Before the 1967 law was enacted, however, steps were being taken to develop a regional structure for the state as authorized by the 1965 legislation. The State Education Agency drafted a tentative plan which was adopted by the State Board in January. Meetings were held in the tentatively mapped out regions to explain the plan to local school officials and to get their reactions. The plan was revised as a result of the regional meetings, and submitted in March to the State Board for final approval. The plan, as adopted by the State Board, established 20 Regional Education Service Centers. See Figure I, page 167.

A number of factors were considered in deciding upon the number of regions and delineating their boundaries. Two factors were prescribed in the 1965 law—that each regional center serve, if possible, an area containing a minimum of 50,000 students, and that each center be so located as to ensure each school district in the area the opportunity to be served.

Other factors also were weighed carefully. To coordinate educational planning with planning being carried on by other agencies, it was desirable to consider regions established for other purposes by these agencies, particularly the Governor's Planning Agency Council. The Council's policies provided that a region for general governmental planning purposes include a metropolitan center and all of the counties bordering on the county containing the metropolitan center. The State Board also gave consideration to the location of universities and colleges and other educational and cultural resources. All these factors were weighed, and no single factor was used as the sole determiner in establishing the boundaries of the Regional Education Service Centers.

The Joint Committee

In carrying out the responsibilities prescribed in the 1965 law to provide for selection of regional center board members, the State Board made provision in the state plan to establish a Joint Committee in each region. The membership would consist of one representative to be selected by the board of each 12-grade district and one representative to be selected by the county school

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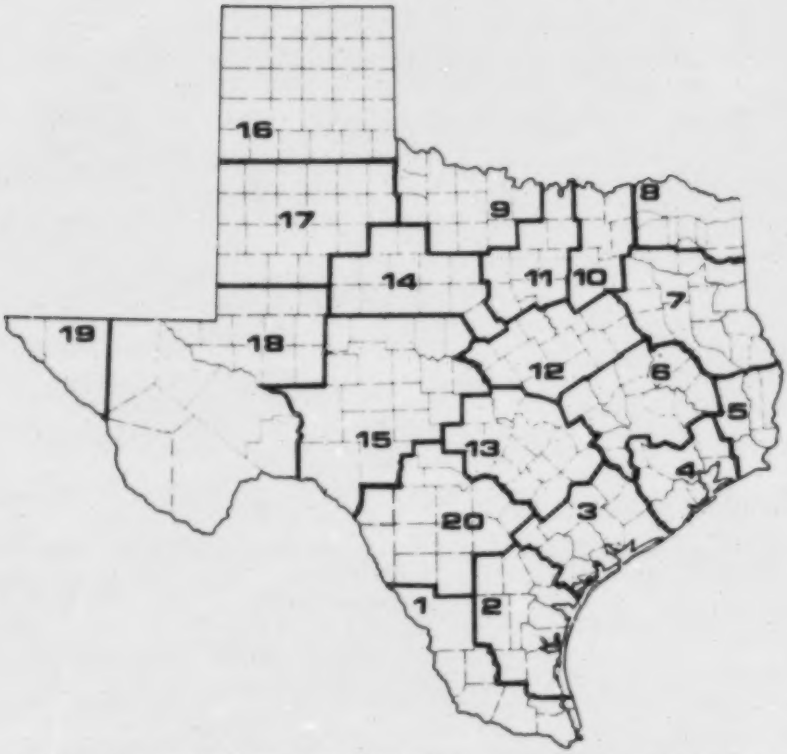

FIGURE I—THE 20 EDUCATION SERVICE CENTERS ADOPTED BY THE STATE BOARD OF EDUCATION ENCOMPASS TEXAS' 254 COUNTIES

board to represent the elementary districts in the county. The selection of a representative was optional with the school board concerned. Consequently, the Joint Committees in each region varied in size, depending upon the number of participating districts. In most instances, local district boards chose the superintendent of schools to represent the district on the Committee.

These Committees were assigned three major responsibilities:

1. Determine whether the regional center board would have five or seven members as permitted in the 1965 law.
2. Elect the number of members decided upon setting rules and regulations for that purpose within the broad guidelines of the state plan, and fill vacancies in the membership that might occur thereafter.
3. Serve the regional center board in an advisory capacity.

In its advisory role, the Joint Committee was assigned responsibility to evaluate regional center services, to suggest changes in center programs, and to recommend new services that should be provided. This advisory role was designed to insure a reflection of the local point of view in the regional center programs.

To enable effective and smooth operation, each Joint Committee was encouraged to develop bylaws for the area organization. To assist in this task, the State Education Agency prepared a model set of bylaws based on the guidelines contained in the state plan.

The State Education Agency also held meetings with the Joint Committee in each region to brief the members on the regional center plan, its potentials for improving education, and their responsibilities as committee members. To illustrate the service potentials, descriptions were given of the programs and services a center could provide. Emphasized too were the suggestions for local orientation and decision-making in planning and operating the service center.

The Board of Directors

The state plan guidelines specified that the Regional Education Service Center Board of Directors, like the State Board of Education and local district boards, be a lay board. A number of reasons led to the decision that a lay board would serve best the purposes of the regional center:

—A board of lay citizens is traditional in the state.

—The lay board would be an independent board, not committed to any one educational institution. (The state plan guidelines further specified that anyone engaged in the area of higher education or anyone serving as a member of a local board of school trustees would not be eligible.)

—The board's viewpoint would be broad, enabling it to operate with a regional perspective. (The guidelines suggested that it be a nonpartisan board, concerned with providing services throughout the region on an equitable basis.)

—A board of lay citizens would foster community interest and involvement of higher caliber lay citizenry in educational planning for the region.

The state plan guidelines specified that the regional center board members be elected by the Joint Committee for three-year staggered terms so that a majority of the members' terms would not expire in the same year. The guidelines also set forth the necessary provisions for board organization, board officers, required meetings, and the functions and responsibilities vested in the board.

As prescribed in the state plan guidelines, the Board of Directors carries out the standard functions of a lay board of education, selects the executive director of the center and develops the policies for the establishment and operation of center programs and services. The chairman of each board is designated by state plan guidelines to serve as a member of a Statewide Advisory Commission on Education Service Centers. This provides the State Commissioner of Education the benefit of a lay advisory group in matters of educational planning on a regional and statewide basis.

The State Education Agency developed materials to assist Boards of Directors to organize and to perform policy-making functions. These materials include guidelines and suggested bylaws and policies covering aspects of the board's work in regional center operation such as governing, structure, personnel functions, planning and program responsibilities, and business affairs.

The state plan provided that the decision to locate the service center in each region would be left to the Board of Directors and set forth the criteria to be used in making that decision. The State Education Agency developed suggestions, based on the criteria, to facilitate the decision-making and included in the sug-

gestions factors to consider in determining the need for establishing one or more service components in a satellite center remote from regional center headquarters, as authorized in the 1965 act.

The Regional Director

A highly important function of the regional center board was the selection of its executive director. The state plan specified that the executive director must hold a graduate degree and "be a person who has demonstrated, through experience in education, a high degree of ability in administration, program development, and experimental programs." The State Board of Education gave the regional boards the authority to set additional qualifications. This policy permitted each board, in response to regional needs and goals, to select the person best suited to serve the region. Here again, the State Education Agency prepared suggestions to aid boards in making a sound selection.

In addition to his administrative and other duties, the executive director in each center is designated in the state plan to serve on the State Elementary and Secondary Education Planning Council. This Council provides the State Commissioner of Education with the opportunity to keep informed on regional needs and programs and to work with the 20 executive directors in educational planning for the state. At the same time, the Council enables the executive director in each region to maintain a statewide perspective on educational planning.

The executive director's planning duties are not limited solely to working with educational planning agencies. The state plan specifically gives him the responsibility to participate with those involved with metropolitan planning and with other planning functions which affect all or a portion of his region.

Regional Service Center Functions

Although the functions of the Regional Education Service Centers have been mentioned earlier, they merit restatement and brief explanation. As provided by the 1967 legislation, these service centers have been established to serve four major purposes:

1. *To operate the regional education media center.* The first task of the center staff is to plan for and to implement the education media services. All media services offered by the center will be those identified by a continuing study of media needs and resources.

2. *To coordinate and encourage development of projects funded under Title III of ESEA.* Familiar with regional needs and resources, the education service center staff will be in a unique position to strengthen the Title III program within the region by assisting local district staffs in planning and developing projects designed to pilot innovative ideas and programs. Moreover, provision is made in the rules and regulations of the State Education Agency concerning federally funded projects, whereby projects may be funded as education service centers.
3. *To provide a locally-oriented base for regional and statewide educational planning.* In carrying out this function, the center must reflect the needs of the region it serves and must have the capacity for dealing with change. Therefore, the center must provide for continuing study of regional needs based upon collection and analysis of information concerning demographic patterns, economic growth and change, and societal trends. Regional educational planning has a high priority among the criteria established by the State Education Agency for determining projects to be recommended for funding under Title III of ESEA.
4. *To provide such additional educational services as may be needed in the region.* Major dimensions of this broadly stated function have been identified to include the following:
   - —Encourage the development of educational manpower through both preservice and in-service education for school staffs.
   - —Provide for pupil diagnostic services—evaluation, treatment, and coordination—not now available in all schools.
   - —Supply supporting instructional services, including curriculum development and assistance to school staffs.
   - —Provide enrichment programs for atypical pupils.
   - —Develop and provide new services as needed and desired in a region.

Financing Regional Center Services

As indicated earlier, education media services are financed jointly by the state and participating local districts, with the state matching annually local funds up to $1 per pupil. The regional center boards set fees for the districts which choose to

participate in media services; the state plan prescribes a minimum annual fee of 50¢ per pupil. Under rules and regulations of the State Education Agency, funds from Title III of ESEA can be used to plan the center and engage the essential staff members. With staffing expenses provided, these local and state funds can be freed for purchase of media and other services. Additional sources—local, state, and federal—may be tapped as other services are developed within each region.

Progress

It may be appropriate at this point to indicate what has been accomplished in the 20 regions established by the State Board.

—All of the 20 regional center boards of directors had been organized by June 1967.

—Each of the regions has received a grant under Title III of ESEA for planning and to employ essential staff.

—Each regional center board had employed an executive director by July 1967.

—All 20 regional center staffs include at least one professional staff member, in addition to the executive director, to direct the education media program.

—The local districts participating in the education media program have 70 percent of the total pupil ADA in the state. There are indications that the percentage of participation will rise next year.

—Eight of the 20 regional centers are administering operational projects funded under Title III of ESEA in addition to the planning projects mentioned above.

While Texas educators have indicated a commendable acceptance of the concept of the regional education service center, they are being realistic. They know that all the services for which the regional centers were created will not be provided immediately, nor will they be provided in every region. They are aware that the center program, if it is to provide truly useful services, must be based upon the needs of the participating districts.

But gradually, as the regional center programs develop from a melding of all available resources—local, state, and federal—multiple types of educational services will be provided, and all of Texas' two and a half million children will have improved educational opportunities.

Process and Product in
SCHOOL CONSOLIDATION

William Inman and Donald Rushing

ALTHOUGH the overriding purpose of school redistricting is educational program improvement, it is not achieved solely by organizing larger districts. An essential next step is the establishment of schools large enough to provide well-rounded programs. School redistricting and school consolidation are but the means to an end—better educational programs. And it is always pertinent to ask: What are the results? The processes involved and the product achieved are the focal points of the River View School District story.

THE PROCESS

The River View School District, encompassing the western two-thirds of Coshocton County, Ohio, was established in late 1961. The district has a total enrollment of 3,000 pupils in grades K-12. It operates five elementary schools, grades K-6; a combination K-6 and grades 7-8 junior high school; another junior high school, grades 7-8, in a separate building; and a consolidated high school enrolling 1,000 pupils in grades 9-12.

To trace the redistricting and school consolidation processes culminating in the River View district, it is necessary first to examine what happened in a broader context. Coshocton County is rural; Coshocton City is the only urban center and is located 72 miles east of Columbus and 100 miles south of Cleveland. It is a county of varied resources—rich rolling farm land in the

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eastern part, hills and valleys with oil and natural gas wells in the western part, and coal mines in the central and southern parts.

In 1956, when the redistricting chain of events started, the county had eleven school districts outside the city, three elementary and eight unified districts. None of the unified districts had more than 1,000 pupils, and the high schools ranged from 84 to 250 pupils.

Under Ohio law, county boards of education are empowered to consolidate school districts, but their decision is subject to a referendum on petition by the voters within 30 days following. In 1956, the Coshocton County Board of Education consolidated two districts which were small in enrollment but covered a fifth of the county area. That year concern was growing in the county about the small high school problem, and for compelling reasons.

Spurs to Action

In 1957, the State Board of Education adopted a revised set of standards for accrediting high schools in the state. Schools failing to meet the new standards would be issued a one-year temporary charter, and state aid would be withheld unless improvements were made. Another hazard affected the college bound graduates of nonaccredited schools who were faced with the possibility of not being accepted by the state colleges.

There was also another economic factor of immediate urgency. Plans were underway to build an electric power plant in the coal producing areas of the southern part of the county. The county board recognized that if this plant were constructed before the small districts in that area were merged, the fortunate district reaping this tax-producing bounty would thereafter strongly resist changing the status quo. The potential tax advantages would be large-scale. (When the new plant was completed later it had an assessed valuation of $20 million which was equal to half the total assessed valuation of all the districts outside the city.)

These two events gave the county board good reason to act, and it did. The new district established the year before in the west central part of the county was enlarged by consolidating with it two adjoining districts—one elementary, grades 1-8, and one unified, grades 1-12. The new district, eventually to become a part of the River View District, embraced about 40 percent

of the county area and had an enrollment of approximately 1,700 pupils in grades 1-12. The three high schools involved had enrollments of 81, 105, and 120, and none of them measured up to the new standards set by the State Board.

Once the new district was established, something had to be done immediately about the three small high schools. The new board voted to hold a bond election to raise funds for constructing a new building. The voters rejected the proposal by nearly four to one. That the board had not decided the location of the proposed new building prior to the referendum, appeared to be a major reason for its defeat. To avoid possible loss of accreditation, the three high schools were combined in the largest existing building.

Crucial Next Steps

From the resounding bond election defeat came demands for a countywide study of district organization. Lacking legal authority to raise tax revenue for such a study, the county board obtained a $4,500 grant from the State Department of Education and enlisted the cooperation of the city board which contributed $2,000. In December 1958, a contract was made with the Miami University Bureau of Educational Field Services. To conduct the study, the Bureau employed the recently retired state superintendent of schools, a man with 35 years of school administration experience in the state. The study took nine months and embraced all major aspects of the educational program in the county including curriculum offerings, school district structure, school buildings, pupil transportation, and school finance. The study report, a 200-page document containing detailed statistical and narrative information on the various aspects of the study, presented four redistricting proposals ranging from a one to a four district plan for the county.

The report also recommended the establishment of a lay advisory committee to study the four proposals and to disseminate information about them. Accepting this recommendation, the county and city boards set up a 15-member committee—5 members from the city and 10 from the other areas of the county.

The study committee met weekly for several months and developed a film strip based on the statistical and narrative material regarding the four proposals and the various factors regarding each one. The committee members used the film strip in meetings with civic groups and organizations, and paved the

way for a substantial degree of readiness for what was to happen later.

It was not until December 1961, that the county board of education made its decision—to proceed with the third proposal. The city school district boundaries would remain unchanged and the remaining districts would be merged into two administrative units. One of these, in the eastern part of the county, was a three district merger with an area of 155 square miles and an enrollment of 1,600 pupils in grades 1-12; the second was the River View District.

The River View District began operating in January 1962, under a 5-member board which was appointed by the county board until elections could be held. For the first six months the county school superintendent served unofficially as River View District Superintendent while carrying on his regular duties.

The new board, composed of three members from the largest of the old districts and one member from each of the other two districts that were consolidated, had difficulties in pulling together as a team. There were numerous stresses and strains sometimes resulting in split 3-2 decisions, which was the case in the selection of the first district superintendent. The man chosen had been superintendent of the largest district consolidated, and his selection was for a one-year term. The same split decision was repeated a year later to extend the superintendent's term for another year. His contract was not renewed at the end of the second year, and for some time the board operated without a superintendent, assigning various central office responsibilities to the school principals. It was not until the high school accreditation visiting team from the State Department of Education urged that a superintendent be appointed, that the board took action. This time the board made its selection from outside the district, and chose a superintendent who had experienced success in two other districts where high schools had been consolidated.

While there was division in the board on many matters, there was also substantial progress. During its first year in office the board decided to attempt consolidation of the three high schools, and made plans to finance a new building.

Consolidation Planning

The planning for a new building involved the development of educational specifications. Once program areas had been identified, the specifications were written by committees of teach-

ers and principals under the leadership of the River View superintendent. These were presented to the architect employed by the board prior to the drawing of preliminary building plans. Construction of the new building would require $2,228,000 raised by bonding.

Before calling the election, however, the board had to determine where the new building should be located. There were sharp differences of opinion within the district. Some people wanted it located near the county seat; those living in the vicinity of the new electric power plant in the southern part of the county wanted it closer to them. To provide a defensible basis for deciding where the school should be located, spot maps were made of where the high school pupils lived and from these maps the pupil population center for the district was determined. The site chosen was two miles south of the largest village in the district and eight miles from the county seat city school district. It was not until action was taken to reconcile the different preferences of local groups, which resulted in the amicable decision, that the board called the bond election.

The first election, held in May 1963, got a 55.4 percent favorable vote but failed because Ohio law at that time required a 60 percent favorable vote on school bonding in special elections in odd numbered years. But the fact that a majority of the vote cast favored bonding was encouraging; that was all that the law required in general elections. In November, the question of bonding was put before the people in the general election and won approval by almost the same vote as in May. High school consolidation had become a reality.

The new $2,228,000 consolidated high school building was ready for use in the fall of 1965. With a capacity of 1,000 pupils the building is conventional in many respects but contains the facilities necessary for operating a comprehensive high school program. Included are various kinds of shop facilities for an extensive vocational education program. The gymnasium has a seating capacity of 2,000 and can be made into three sections to accommodate different kinds of activities. Modern, fully equipped, and air-conditioned, the building has an auditorium which seats nearly 1,000 persons and is the only facility for holding large public meetings in the district. The auditorium has become a center of activity in the community with planned events taking place every week by the local divisions of such clubs and agencies as the Community Artist Series, the Lions

Club, the Farm Bureau, the area Chamber of Commerce, and numerous other civic clubs.

THE PRODUCT

The fruits of these efforts can be best identified by comparing the programs and services of the consolidated high school with those provided by the small high schools it replaced.

Course Offerings

Prior to the 1957 consolidation, none of the three high schools offered more than 25 courses for credit in any one year. By 1960, the course offerings increased to 35 and by 1963, there were 42 course offerings. Today, the River View High School offers 87 courses for credit, which is three times the number of courses prior to the second consolidation, and over twice the number since consolidation.

—The Vocational program is one area where major additions in the curriculum have been made. Such courses as auto mechanics 1 and 2, electronics 1 and 2, cosmotology 1 and 2, and vocational business and office education, a dream before consolidation, are now vital to the school program.

—In the area of Industrial Arts some wood working and two years of drafting had been offered, whereas four years of drafting, as well as courses in wood working, metal work, and forging, are now part of the program.

—The Mathematics program has been expanded from three to seven courses to include algebra 1 and 2, trigonometry, solid geometry, and general, practical, and plain mathematics courses.

—The Foreign Language program has been expanded from two languages, Spanish and Latin for two years each, to the same languages for four years each, with French added as a third language, for a three year program.

—The Science curriculum has fared in the same way. Previously, general science and biology were offered on a yearly alternate basis with chemistry and physics. Now, eight science courses are offered each year—biology 1 and 2, chemistry, physics, physical science, human physiology, general science, and a science seminar.

—The Social Studies program has been expanded to include psychology, sociology, world geography, and modern history in addition to courses in American history, world history, and gov-

ernment, offered prior to consolidation.

—The English curriculum which had consisted of the basic four year courses with no grouping of students, today offers college English, general English, practical English on each grade level plus dramatics, journalism, speech and composition, and library science, as separate courses.

—The Music courses have increased to several grade levels of chorus, choir, band, concert orchestra, and, more specifically for the musically inclined, a course in music theory and another in music appreciation.

—None of the small schools, prior to 1957, had a certified librarian. Now, in the new library which seats 150 pupils, there is a full-time certified librarian, a secretary, and numerous student library aides. In addition, since the Spring of 1966, as many as 7,000 new books have been purchased for the library and funds have been allocated to purchase additional books to meet public school library standards.

Student Activities

Prior to consolidation, club activity in the schools was limited to participation in the Future Farmers of America, the Future Homemakers of America, the Science Club, the Audio-Visual Club, and the Student Council. Since consolidation, the school has broadened the opportunities of students to participate in the Future Teacher's Club, the Psychology Club, the Democratic Club, the Medical Interest Club, the Language Club, the Rocket Club, the Vocational Club, the National Honor Society, the Varsity Club, the Librarians Club, and 22 others.

Extracurricular activity includes also the development and production of the Yearbook and gives budding journalists an opportunity to work with the school newspaper.

The athletics program has moved ahead so that now all state sanctioned competitive sports, except swimming, are offered.

Class Size

The Ohio State Aid program is based on a class unit of 30 students per teacher yet, prior to 1957, the small high schools operated 31 classes with less than 10 pupils and 72 classes with less than 15 pupils. Conversely, there were 42 classes with a pupil range in excess of 38 pupils. The first extreme was not economically sound; the second was not educationally sound. The new school made it possible to make effective use of teaching

resources. At present, no class is larger than 28 pupils (with the recognition that this is a trifle high) but the English class ratio averages a favorable 23 pupils.

In a comprehensive program some small classes are inevitable; however, there are only seven academic subject offerings with less than 15 enrolled in the program. This is exclusive of the vocational classes.

Instructional Staff Load

Before consolidation, there were 10 teachers who had four different class subject preparations per day; 15 who had five; and 8 who had six. Presently, no teacher has more than two different preparations per day other than to fit his presentation to a particular class.

Pupil Personnel Services

—The once part-time guidance counselor position has been expanded to two full-time certified counselor positions. In addition, there is a part-time counselor who is responsible for the Vocational Program Counseling Services.

—In contrast to the limited health services at one time provided by the County Health Office, today a registered nurse provides health services and cooperates in the health classes.

—In the small high schools the principal was responsible for attendance and pupil accounting. Today, the new school has a full-time assistant principal, a specialist in school administration, who is responsible for attendance and pupil accounting and student discipline.

Elementary Program Gains

The establishment of River View District has made possible important elementary school program changes. Kindergartens have been established in each of the elementary schools. In addition to extending the program downward by the addition of kindergartens, elementary school organization has been changed throughout the district from grades 1-8 to grades K-6. Moving the grade 9-12 pupils into the consolidated high school has made it possible to use the facilities vacated in two of the old buildings for grades 7-8 junior high school purposes.

Additional program benefits have resulted at the elementary level. School nursing services have been added. Other services include a full-time speech therapist and two full-time remedial

reading teachers who travel from school to school to help those children who have speech and reading difficulties.

PERSPECTIVE

It is no exaggeration to say that the dreams and the goals of those responsible for establishing the River View District, including the citizens whose active support was essential, have become a reality. The fruits of their combined efforts are the improved educational opportunities for their children. This, undeniably, is the prime purpose of school redistricting and school consolidation.

What Does Research Say About
A LOCAL SCHOOL DISTRICT?

E. Robert Stephens and John Spiess

OVER THE PAST two decades, considerable interest has been focused on the effect of school size on various aspects of the educational process. This article brings together for review and comparison research efforts concerned with the question of adequate size of local school districts. While this review is not all inclusive, the effort was made to consider a representative sample of research dealing with the most commonly used measure of a local school district size—pupil enrollment. In this article, the treatment of adequate size deals with the total number of pupils enrolled in a local school system or in a single attendance center within a local district.

For purposes of this presentation, the size criterion, as measured by the number of pupils enrolled, will be the principal variable. Relationships will be considered between enrollment and the following factors: pupil achievement, educational costs, breadth of educational program, extracurricular activities, professional staff qualifications, special services, and school plant.

SIZE OF ENROLLMENT AND PUPIL ACHIEVEMENT

In unearthing the research material relating to size and pupil achievement, it appears that the secondary school level has received the greatest share of attention. However, the few research efforts identified at the elementary school level suggest

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a positive relationship between school size and pupil achievement.

As far back as 1932, Nelson surveyed the literature relating to elementary pupils' achievement and the size of school attended. He noted that 22 of 24 researchers found a higher level of academic achievement in the larger schools. However, his study of the San Francisco area elementary schools was inconclusive and this led him to caution against assuming that large size guarantees educational efficiency[1].

More recently, Street, Powell, and Hamblin concluded that Kentucky seventh and eighth graders in schools with 300 or more pupils demonstrated higher achievement than those in schools with enrollments of 100 or 299, or with less than 100 pupils[2]. The size of schools in the Kentucky sample were relatively small; of the 112 schools studied, 47 were one-room rural schools, and the largest attendance center in the sample enrolled 836 children.

Theophilus restricted his sample of Iowa elementary schools to single attendance centers with 200 or more pupils. He reported that pupil achievement, as measured by the Iowa Tests of Basic Skills, definitely increased as attendance center size increased[3].

Many studies focusing on secondary schools have found a high positive correlation between school size and academic achievement. For example, Kreitlow paired ten Wisconsin school districts on the basis of whether they were reorganized administrative units. He used achievement test results for first graders and observed slightly higher achievement by children in non-reorganized districts[4]. However, achievement tests administered to the same pupils during sixth, ninth, and twelfth grades showed that no correlation existed between size and ninth grade achievement as measured by standardized tests[5].

Using the Iowa Test of Educational Development, Gray concluded that pupils in Iowa high schools with enrollments exceeding 1,000 had the greatest "gain score." Pupils in high schools of 400 to 999 enrollment achieved the highest composite scores[6]. Contradictory findings were recently reported in another Iowa study in which 323 high schools constituted the sample. Stout and Rudolph stated that the relationship of student academic achievement to size was not statistically significant[7]. An earlier Iowa study tended to refute the latter conclusion and to strengthen Gray's observations. In his 1960 investigation, Feldt analyzed scores from the 1959 Iowa Tests of Educational Development taken by 80 percent of Iowa's high school students. This analysis indicated that the differential in the senior year between

the largest and the smallest high school amounted to a full year's academic growth[9].

For purposes of research with college bound seniors, Arkansas high schools were placed in five enrollment size classifications: 150 students or less, 200 to 350, 400 to 550, 600 to 750, and over 750. Achievement was based on American College Test scores. Seniors from schools in the three largest classifications had significantly higher composite scores than those from the two smallest classifications[9]. Similar findings for 46 Nebraska high schools were reported by Jantze who noted that scholastic attainment increased as school size increased up to a point somewhere in the 400 to 799 enrollment range. Above 800, achievement began to show a gradual decrease[10].

With reference to the exceptional high school senior, those in the upper 10 percent, at least one researcher disagreed with some of the findings previously cited. He concluded that size of school is not an important factor when the exceptional student's achievement is measured by standardized tests[11].

Small school proponents frequently contend that student dropout rate is much lower in the small high schools than in the larger secondary attendance centers. Empirical evidence in support of this contention was not uncovered. In fact, two of the studies reviewed did indicate that holding power of high schools is not related to total enrollment. Hartung analyzed dropout rates in 22 Illinois schools outside the Chicago area and found no statistically significant differences in large and small high school dropout rates[12]. Similar findings for Iowa schools were reported by Opstad, who concluded that school size per se is not related to a school's holding power[13].

Student success in college and its relationship to the size of the secondary school attended also has been a popular subject for the researcher.

Weaver stated that graduates of large North Carolina high schools averaged more college credit hours from freshman through senior year than did graduates of small schools. Further, graduates of small North Carolina high schools had lower college grade point averages from freshman through senior year than did graduates of larger schools. The graduates of large high schools, when compared to graduates of smaller schools, were less prone to failure in college and more likely to graduate[14].

When related to college success, the optimum enrollments in Iowa secondary attendance centers were found to be between 400

and 999. Graduates of high schools in this category had not only the highest proportion of graduates enrolled in college, but they obtained higher college freshman grade point averages than did students from smaller or larger schools[6].

However, a 1959 study of 127 seniors at Central Michigan University indicated that those seniors who had graduated from large high schools did not have college grade point averages significantly higher than graduates of smaller schools[15]. Furthermore, a negative relationship between high school size and college success was noted for 637 Texas A. & M. agricultural students who had ranked in the lower quartile on achievement and aptitude tests in high school[16].

One researcher concluded that the pattern of studies completed by a high school student influences college achievement more than does the size of the secondary school. He concluded, therefore, that if the small high school could offer the diversity of courses usually found in the larger school, there would be no difference in college achievement between graduates of small and large schools[17].

The Ohio School Survey Committee reported that students from high schools with enrollments under 250 were generally less prepared for college and made poor college records when compared with students who had graduated from schools with more than 250 pupils[18].

Pupil achievement has been considered also in terms of the number of Ph.D.'s granted to graduates of secondary schools of various sizes. The findings strongly favored the larger schools[19].

Failure to complete college has also been considered in relation to size of high school. From a study of 617 students who had withdrawn from the University of Arkansas, the withdrawal rate was significantly greater among graduates of small schools. However, when the factor of mental ability was held constant, size of the secondary school attended was of little consequence[20].

SIZE OF ENROLLMENT AND EDUCATIONAL COSTS

Most studies relating school size to educational costs have focused on the secondary schools. However, Grieder reported that the point of greatest economy was reached in elementary schools with an enrollment of 400 children. According to the same writer, peak economy was attained in secondary schools of 500 students[21].

Other researchers, including C. B. Smith,[22] have stressed cost advantages as school size is increased to the 800 to 1,200 pupil range. It appears that above this range, cost factors increase as school size increases. Morris, who called attention to high costs per pupil in schools with enrollments below 200, suggested that per pupil expenditure tended to level off after enrollment exceeded 600[23]. In one Iowa study it was reported that the lowest secondary school costs were found in schools in the 500 to 800 pupil range[7]. Another study in Iowa suggested 1,000 as the optimum secondary enrollment figure for fiscal efficiency[6].

One writer stated that the greatest increase in per pupil expenditure occurred as secondary school enrollment fell below 350 students[24]. Peck's results were similar in that per pupil expenditures and size were inversely related, and the greatest cost increase came about as enrollment dropped below 350[25].

Studies of districtwide educational costs have also established an inverse relationship between size and cost. This relationship seems to hold when subdistricts in large metropolitan school districts are considered[26]. An upper limit of the inverse ratio was established by Hansen, however. Focusing upon the total cost of educational programs in grades one through twelve, he investigated 589 school districts in ten states. District size ranged from 1,500 to over 846,000 with a median of approximately 50,000 pupils. Hansen asserted that unit costs declined consistently as district size rose to approximately 20,000 students[27].

An earlier recommendation specified 10,000 as the optimum enrollment for economic efficiency[28]. Knezevich, in turn, suggested that a local school district needs 10,000 to 12,000 pupils to provide a desirable educational program at a reasonable cost per pupil[29]. In a recent doctoral study, Rajpal limited his districtwide consideration to the secondary level only. He found that the mean instructional expenditure for Iowa high schools per resident student in average daily attendance decreased consistently from $579 in districts with secondary enrollments of 51 to 100, to $354 in districts with 801 to 6,000 high school students[30].

Morphet, Johns, and Reller, in a recently published work, also looked at effects of school size variations on fluctuations in unit costs. They suggested that in districts with fewer than 1,200 pupils, high costs deterred provisions for needed educational opportunities. It was noted, however, that beyond the 50,000 level of enrollment, costs tended to rise again and in-

creased as much as $10 per pupil in the very large districts. It appeared, therefore, that cost factors dictate a minimum enrollment of 10,000 pupils within a school district. These writers stated that the optimum enrollment for economic efficiency was 40,000 to 50,000[31].

SIZE OF ENROLLMENT AND BREADTH OF EDUCATIONAL PROGRAM

Much of the research concerned with size and educational program relationships has been limited to the secondary level or to districtwide investigations. However, one study concluded that California districts operating only elementary schools with enrollments of less than 900 were too small to legally and practically assume full responsibility for the nature and quality of the educational program. The same statement was deemed applicable to unified K-12 districts of fewer than 1,500 students and high school districts enrolling fewer than 300 students[32].

Most of the literature reviewed at the secondary level favored the larger schools. The typical Texas high school with 200 or less students, for example, offered an average of 11 subjects while a school with an enrollment range of 201 to 500 offered 18 subjects. High schools enrolling 500 or more pupils average 27 subject offerings[33]. In an Ohio study in which high school programs were evaluated, it was found that no high schools with less than 100 pupils were rated as satisfactory. Only one percent of those with enrollments of less than 200 were considered satisfactory. It was not until the 500 pupil level was reached that a majority of the schools received the satisfactory rating[18].

The Morris Survey of secondary schools in nine southern states showed a direct and positive relationship between curriculum variety and level of enrollment[23]. Iowa findings were similar in that the state's largest high schools had more curricular offerings than schools in any other size category[30].

North Carolina gives evidence also to support the conclusion that larger high schools offer a more varied program of studies. It was shown that small North Carolina secondary schools schedule more courses on an alternate year basis than do the larger schools[14]. A 1961 National Education Association survey concentrated on course offerings in math, science, and foreign languages. It was found that among all secondary schools with fewer than 300 pupils in average daily attendance, 10 percent offered no

chemistry, 20 percent did not have a course in physics, 40 percent did not offer trigonometry, and 29 percent failed to offer a foreign language[34].

Recent writings in educational administration have urged support for the concept that breadth of secondary education programs requires sizable enrollments. Van Miller observed that many authorities suggest that in most cases curriculum needs dictate high school enrollments of 700 to 1,500 or larger[35]. Knezevich also called attention to statements by writers in the field of education who advocate a minimum enrollment figure of 400 to 500 students to help insure quality programs. He also noted that the same writers have specified 1,500 as the minimum enrollment for a school district[36].

Of the several secondary school studies reviewed, Woodham's conclusions were most unusual. From his doctoral research in Florida schools, he noted a tendency for increases in curriculum offerings to decelerate after a certain enrollment point is reached. He concluded that course offerings increase rapidly as size increases to approximately 450 pupils. Above that number, the rate of increase in number of offerings slowed appreciably[24].

When the entire school district is studied, research findings seem to favor the larger school systems. According to Sargent, "evidence from several state studies, particularly those in Ohio and New Hampshire, seems clearly to establish the general relationship between size of district and the quality of education[37]." Faber corroborated Sargent's basic postulate when he reported what his own review indicated that all districts rated high in "breadth of curriculum" had enrollments in excess of 9,000 pupils[38]. Clark[39] and Rajpal[30] have come up with similar findings.

Various educational writers have cited fairly specific enrollment figures as criteria for adequacy of educational program. Three recent texts provide excellent examples. Knezevich suggests that a comprehensive education program would require a districtwide enrollment of at least 10,000. He commented, however, that an effective intermediate unit (regional educational service agency) could provide needed programs and services in sparsely settled areas. Under such conditions, a minimum enrollment of 2,400 pupils could be considered acceptable[36]. Campbell, Cunningham, and McPhee, suggest that no school district carry less than 2,000 children enrolled at any given time, with 10,000

as an optimum enrollment figure to assure program quality [10]. Lane, Corwin, and Monahan call attention to earlier recommendations for at least 12,000 students as assurance of adequate programs. Looking to the future, they suggest that 12,000 pupils may prove to be too few. A minimum enrollment of 10,000 was proposed as a current and realistic minimum criterion, if the district is to furnish adequate programs and services for its students [11].

SIZE OF ENROLLMENT AND EXTRACURRICULAR ACTIVITIES

It is justified to assume that the quality and scope of the secondary school's extracurricular program might have pertinence to the question of adequate school size. Apparently, such a relationship has not received research attention for only a few studies, even remotely touching on this point, were identified.

One researcher concluded that Indiana high school activity programs, evaluated by criteria set by the North Central Association of Colleges and Secondary Schools, were improved after school district reorganization. Activity programs in high schools in reorganized districts were rated significantly higher than their counterpart in nonreorganized districts [12].

The limited empirical evidence about pupil participation and evaluation of extracurricular activities was somewhat contradictory. Results of a study of Iowa high schools indicated that pupil activity was greatest in secondary schools with enrollments of 150 to 399. Students in schools within this size bracket also rated their extracurricular programs higher than students in schools in any other size category [6]. In contrast, a second researcher in the same state reported no relationship between school size and extent of pupil participation in extracurricular activities [13].

Woods, in his study of Southern California high schools, approached the question from a different perspective. He considered parent reactions and found that the most favorable parental reaction to the extracurricular program offering was in the school size range of 1,200 to 1,599 students [14]. It is significant that in these times of extensive local district reorganization, one researcher reported a "definite and consistent relationship between participation in school activities and the distance from home to school [14]."

SIZE OF ENROLLMENT AND PROFESSIONAL STAFF QUALIFICATIONS

Research seems to indicate that a positive relationship exists between measurable professional qualifications of teachers and size of enrollment. It is possible to cite several pertinent findings. An Arkansas investigator established an inverse relationship between school size and the number of teachers with emergency certification, and the number of teachers instructing outside their major field of preparation. He discovered, too, that the relative number of teachers with advanced degrees increased with size of school[45].

The study of secondary schools in nine southern states, referred to earlier, found that the larger the enrollment, the greater the percentage of teachers holding a masters degree, and the lower percentage of teachers without a bachelors degree[23].

DeGood compared Ohio high schools with a 500 to 700 pupil enrollment with those having 200 or less pupils. He found that teachers in smaller schools received lower salaries, had fewer years teaching experience, and were less likely to hold an advanced degree[46].

Another researcher reported a direct relationship between size and the percentage of experienced teachers, the percentage of teachers with standard certificates, the percentage of teachers with degrees from out of state colleges and universities, and the number of pupil units taught by certified teachers. The amount of college training of the teachers, the percentage of women teachers, and salary levels were related directly to size of school[47].

In another study, all public high school districts in Iowa were divided into eight size classifications. When mean qualifications of teachers were compared with school size, the largest districts had the more experienced staffs with better academic preparation[30].

Specific minimal or optimal enrollment recommendations, based upon the factor of teacher qualifications, were not discovered in the literature. But obviously, many writers considered staff needs and qualifications when proposing minimum and optimum enrollments based upon other important factors.

Two recently published texts clearly illustrated the point that various other personnel considerations might be pertinent to the question of the proper size of a school. Miller observed that

a few authorities have insisted that an elementary attendance center should be of a size conducive to professional stimulation and flexibility. To achieve these goals, it has been suggested that each elementary school should have at least two classes, or sections, per grade level[35]. Thus, if 25:1 is accepted as a fairly standard pupil-teacher ratio, a single K-6 attendance center should have a minimum of 350 pupils.

As previously indicated, Campbell, Cunningham, and McPhee suggested 2,000 students as a minimum and 10,000 as an optimum for school districts. They also recommend a 40,000 maximum in city school districts with emphasis on the desirability of subdistricting reasoning that when enrollment in a district exceeds 40,000, it is too large and runs the risk of becoming bureaucratic[40].

SIZE OF ENROLLMENT AND SPECIAL SERVICES

The special services considered here are supplementary and include guidance, counseling, and psychological services. Also included are services and programs classified under the heading of special education. These cover remedial classes and special classes for exceptional or handicapped children.

Literature is plentiful on the subject of special programs and services as they relate to the size of districts, and particularly in the area of special education in which incidence ratios and pupil population totals are extremely important. In all special service fields, scholars such as Dawson[48] and Conant[49] have provided meaningful data concerning the desirable numbers of pupils when providing special programs and services. A detailed review of the abundant research relating school size to provision of special services is, however, far beyond the scope of this review. Only a few illustrative examples are presented here.

The guidance program, particularly at the secondary level, has received a great deal of attention. A majority of the studies reviewed deal primarily with counselor-student ratios in which Conant's recommendations of one counselor for every 300 or 400 students are referred to frequently in more recent literature[49]. Hecker, who studied high school dropouts, can be included among the staunch advocates of effective guidance services for secondary students. His recommendation is to have one full time counselor serve a maximum of 500 students[50].

The North Central Association of Colleges and Secondary

Schools has recommended that all schools enrolling fewer than 300 pupils should provide at least one half time guidance counselor, and that schools with enrollments in excess of 300 should have one full time counselor for every 500 students[51].

The National Health Survey for July 1957 to July 1958 points out that for each 1,000 children under fifteen years of age, 41 had a chronic or permanent defect which would necessitate special educational provisions. For those requiring special services, 8 percent had visual difficulties, 15 percent had auditory problems, 26 percent were speech defectives, 36 percent had orthopedic problems, and 14 percent experienced a variety of other difficulties[52]. The National Health Survey percentages are representative of some of the problems confronting the public schools in providing special services.

The size of a school district is obviously related to ability to provide the necessary special programs and services. Patterson's doctoral research showed that the professional qualifications of special service personnel have a parallel increase with school size[47]. DeGood reported similar findings and observed that guidance programs in Ohio's smaller high schools were weaker than those in the larger schools[48]. Gray found that secondary schools enrolling 400 to 999 students ranked highest in terms of employment of certificated counselors and number of counseling hours available to students. However, when consideration was given to employment of qualified librarians and number of librarian hours available to students, the highest ranked schools were in the 1,000 or more category[6].

Other applications of the size criterion to special services for students are noted in the literature, but these are not within the intended scope of this presentation. Attention should be given to the standards set for library services, personnel, books, and materials, by the North Central Association of Colleges and Secondary Schools[51] and the American Library Association[53]. These standards are based upon the size criterion as measured by number of pupils enrolled.

SIZES OF ENROLLMENT AND SCHOOL PLANT

There is, of course, an obvious direct relationship between school size in terms of pupil enrollment and the size of a school building required. For an honest analysis of this relationship, it would be necessary to delve deeply into the extensive research in

such specialized areas as space utilization and square feet standards for the numerous types of activities within the educational program.

An extensive review of the copious literature concerned with school buildings and sites has not been attempted. Instead, attention is directed to the standards for space utilization in elementary and secondary schools as recommended by the National Council on Schoolhouse Construction [54]. Other organizations, such as the Athletic Institute and the American Association for Health, Physical Education, and Recreation [55], have developed additional standards for special purpose school facilities. Professional journals also have provided recommendations concerning educational space needs. Knezevich, for example, used this channel to propose standards for both elementary and secondary schools [56].

The studies selected for this discussion focus principally upon the school building and make specific recommendations as to the number of students to be housed in a single building.

For the elementary school, MacVittie stated that the optimum size for a single attendance center should be 300 to 400 pupils with provision for 12 to 14 rooms. His recommendation was based upon building and space economies, provision for lunch facilities, provision for a health program, and opportunities to participate in school activities [57].

Cornell suggested 1,500 students as optimal for a single high school. His recommendation was based exclusively on space utilization. He stated that "if comparable standards are applied in the allocation of spaces and schools of different size, there is not much gain in space after a school has reached about 1,500 [58]."

According to Mays, the number of high school students in a single attendance center should not exceed 2,000. He believed that by the time enrollment reaches 2,000, provisions have usually been made for library facilities, gymnasium, cafeteria, swimming pool, heating plant, lavatory facilities, office space, counseling areas, music quarters, and storage rooms. Therefore, in Mays' opinion when enrollment exceeds 2,000, construction of an additional plant should be seriously considered [59].

It was recommended in a study conducted for the San Antonio, Texas, Independent School District that a high school be constructed for 2,400 students in order to achieve optimum use of space [60].

CONCLUSIONS

Because of a multitude of variables uncovered by the researchers, it is not possible to provide the magic numbers to determine an adequate school size. But with the available research, conclusions, recommendations, and opinions, there is sufficient commonality apparent to allow for a few generalized conclusions. The research and related literature reviewed indicate several factors concerning the size of the local district as well as the attendance centers within the district.

Most of the studies reviewed pointed to a direct and positive relationship between size of school and seven pertinent factors: pupil achievement, educational cost, breadth of educational program, extracurricular activities, professional staff qualifications, special services, and school plant. Up to an optimum enrollment level, still unspecified except in pupil number range, schools appear to improve in terms of many of the factors. This leads to some evidence for support of the contention that larger school districts should be formed in many areas of the United States. Paradoxically, there is also evidence to indicate that some school districts are too large when relationships between some of the factors and the enrollment criterion are considered.

Enrollment recommendations for elementary attendance centers are not plentiful, but, based upon the studies reviewed, the consensus indicates that a 300 to 400 pupil elementary school is recommended.

Relationships between the size variable and each of the following factors support the preference for a secondary school de-described, however ambiguous, as "medium sized."

Pupil achievement favored, in general, a secondary attendance center enrolling slightly in excess of 1,000 students. Educational cost, according to the evidence available, suggests a slightly larger school. It appears that there is an optimum enrollment somewhere in the 1,000 to 1,500 pupil range, but at this point, unit costs no longer decrease significantly as enrollment increases. Breadth of educational program and special services also call for a secondary school of slightly more than 1,000 students. School plant if used independently, suggests a slightly larger secondary school than the other factors.

Considerable variance was discovered regarding district size. It can be hypothesized that much of this contradiction stems

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from varying conceptions of the needs and responsibilities for special services. Several authorities took into account the supporting services of an intermediate district structure when thinking in terms of district size. In such cases, lower enrollments were cited as optimum, because it was assumed that the intermediate agency would provide various special services and programs on an area basis.

A student population of 10,000 for a single school district was most frequently mentioned as the minimum number in terms of a majority of the seven factors. The recommended student population ranges anywhere from 1,000 to 50,000. But as educators talk in terms of an eventual reduction in the years ahead of from 5,000 to 10,000 local school districts in the United States, it is obvious that the trend is toward larger minimums. For most educators and educational policy makers, this is a step in the right direction.

REFERENCES

1. Nelson, Thomas L. "A Comparison of the Achievement of Pupils of One or More Teachers with that of Pupils in Schools with Eight or More Teachers." Doctoral dissertation (Unpublished). Berkeley: University of California, 1932.
2. Street, Paul; Powell, James H.; and Hamblin, John W. "Achievement of Students and Size of School." *Journal of Educational Research* 55: 261-266; March 1962.
3. Theophilus, Wadhawa Singh. "Relationship Between Size of School and Expenditures and Quality of Education in Elementary Schools." Doctoral dissertation (Unpublished). Ames: Iowa State University, 1954.
4. Kreitlow, Burton W. "Reorganized Districts of Wisconsin." *Special Bulletin*. Madison: University of Wisconsin, 1961.
5. Bragg, D. H. "A Study of Size-Cost-Achievement Relationships in Reorganized School Districts in Wisconsin." Doctoral dissertation (Unpublished). Madison: University of Wisconsin, 1960.
6. Gray, Stuart C. "A Study of the Relationship Between Size and the Number of Qualitative and Quantitative Factors of Education in Four Sizes of Secondary Schools in Iowa." Doctoral dissertation (Unpublished). Iowa City: University of Iowa, 1961.
7. Stout, Jerry B. and Rudolph, Wayne A. "Does Size Make a Difference?" (Unpublished). Iowa City: University of Iowa, January 1967. (Mimeographed)
8. Feldt, Leonard S. "The Relationship Between Pupil Achievement and High School Size." (Unpublished). Iowa City: University of Iowa, 1960. (Mimeographed)
9. Smith, Fay W. "An Analysis of the Relationship of Size of Arkansas High School and the Achievement of College Bound Seniors." Doctoral dissertation (Unpublished). Conway: Arkansas State University, 1961.
10. Jantze, Ralph D. "An Analysis of the Relationship of Accreditation, Finance, and the Size of Nebraska High Schools to Scholastic Achievement." Doctoral dissertation (Unpublished). Lincoln: University of Nebraska, 1961.

BEST COPY AVAILABLE

11. Anderson, Kenneth E.; Tate, C. Page; and Smith, Herbert A. "A Study of the Variability of Exceptional High School Seniors in Science and Other Academic Areas." *Science Education* 42: 42-59; February 1958.

12. Hartung, Maurice. "Is There an Optimum Size for a High School?" *School Review* 61: 68-72; February 1953.

13. Opstad, Paul E. "Nonscholastic Factors Associated with Dropouts from Public Schools in Iowa." Doctoral dissertation (Unpublished). Iowa City: University of Iowa, 1958.

14. Weaver, Charles H. "The Influence of Size Upon the Quality of the High School." Doctoral dissertation (Unpublished). Chapel Hill: University of North Carolina, 1961.

15. Altman, Esther Rogal. "The Effect of Rank and Class in Size of High School on the Achievement of Central Michigan Senior Class of 1957." *Journal of Educational Research* 52: 307-309; April 1959.

16. Bertrand, J. R. "The Relationship Between Enrollment of High Schools from which Students Graduated and Academic Achievement of Agricultural Students: Texas A & M College." *Journal of Experimental Education* 25: 59-69; September 1956.

17. Lathrop, Irvin T. "Scholastic Achievement at Iowa State College Associated with High School Size and Course Pattern." *Journal of Experimental Education* 29: 37-38; September 1960.

18. Ohio Education Association. "The Relationship Between Academic Achievement of Students in College and the Size of High School from which they were Graduated." Report of the Education Council. Columbus: the Association, 1959. pp. 7-10.

19. Harmon, Lindsay. "High School Backgrounds of Science Doctorate." *Science* 133: 34-54; March 1961.

20. Dickenson, Elbert L. "Analysis of the Relationship of Size of Arkansas High Schools to Academic Success of Graduates in the First Year at the University of Arkansas." Doctoral dissertation (Unpublished). Fayetteville: University of Arkansas, 1958.

21. Grieder, Calvin. "Relation of School District Reorganization to Finance in Business Administration." *Review of Educational Research* 17: 167-177; April 1947.

22. Smith, C. B. "Study of the Optimum Size of Secondary Schools." Doctoral dissertation (Unpublished). Columbus: The Ohio State University, 1961.

23. Morris, Harold J. "Relationship of School Size to Per Pupil Expenditure in Secondary Schools in Nine Southern States." Doctoral dissertation (Unpublished). Nashville: George Peabody College for Teachers, 1964.

24. Woodham, William J., Jr. "The Relationship Between the Size of Secondary Schools, the Per Pupil Cost and Breadth of Educational Opportunity." Dissertation (Unpublished). Gainesville: University of Florida, 1951.

25. Peck, Roderick B. "The Influence of Enrollment and Expenditures Upon Quality of Education in Iowa School Districts Maintaining High Schools." Doctoral dissertation (Unpublished). Ames: Iowa State University, 1952.

26. Butterworth, Julian E. *Improving Educational Opportunities in Rural Areas.* University of the State of New York Bulletin No. 1322. Albany: New York State Department of Education, August 1, 1946.

27. Hansen, N. W. "Economy of Scale in Education: An Analysis of the Relationship Between District Size and Unit Cost in the Public Schools." Doctoral dissertation (Unpublished). Stanford: Stanford University, 1964.

28. Johns, Roe L. and Morphet, Edgar L. "Relation of School District Reorganization to Finance in Business Administration." *Review of Educational Research* 20: 115-123; April 1950.

29. Knezevich, S. J. "Why Continue the Office of County Superintendent?" *Nation's Schools*, Vol. 52, No. 2, pp. 63-65; August 1953.

30. Rajpal, P. L. "A Study of Relationship Between Expenditure and Quality Characteristics of Education in Iowa Public Schools." Doctoral dissertation (Unpublished). Iowa City: University of Iowa, February 1967.

31. Morphet, Edgar L.; Johns, Roe L.; and Reller, Theodore L. *Educational Organization and Administration*. Second Edition. Englewood Cliffs, N. J.: Prentice Hall, 1967.

32. Morphet, Edgar L. and Ross, John G. *Local Responsibility for Education in Small School Districts*. Legislative Problems No. 1. Berkeley: Bureau of Public Administration, University of California, 1961.

33. Barr, W. M.; Church, Harold H.; and McGhehey, Marion A. "Trends in School District Reorganization in Indiana." *Bulletin of the School of Education*, Vol. 32, No. 6. Bloomington: Division of Research and Field Studies, Indiana University, 1956. p. 28.

34. National Education Association, Research Division. "Subjects and Small High Schools." *Research Bulletin*, Vol. 40, No. 2, May 1962.

35. Miller, Van. *The Public Administration of American School Systems*. New York: The Macmillan Company, 1965.

36. Knezevich, S. J. *Administration of Public Education*. New York: Harper and Row Publishers, 1962.

37. Sargent, Cyril G. "Rural Folk Lose Voice in Children's Education." *Phi Delta Kappan* 38: 327; May 1957.

38. Faber, Charles F. "Measuring School District Quality." *American School Board Journal*, Vol. 149, No. 4, pp. 11-12; October 1964.

39. Clark, Harold F. *Cost and Quality in Public Education*. Syracuse: Syracuse University Press, 1963.

40. Campbell, Roald F.; Cunningham, Luvern L.; McPhee, Roderick F. *The Organization and Control of American Schools*. Columbus, Ohio: Charles E. Merrill Books, Inc., 1965.

41. Lane, Willard R.; Corwin, Ronald G.; and Monahan, William G. *Foundations of Educational Administration*. New York: The Macmillan Company, 1967.

42. Kent, Walter K. "Educational Opportunities in Nine Reorganized High Schools." Doctoral dissertation (Unpublished). Bloomington: University of Indiana, 1958.

43. Woods, Thomas E. "Relationship of High School Size to Curricular Offering." Doctoral dissertation (Unpublished). Stanford: Stanford University, 1957.

44. Morgan, Don L. "The Relationship of the Distance from Home to School Upon Participation in Extracurricular Activities." (Unpublished). Iowa City: University of Iowa, January 1967. (Mimeographed)

45. Collingsworth, Jack B. "An Analysis of the Relationship of Size of Arkansas High Schools to Selected Qualifications of High School Teaching Personnel." Doctoral dissertation (Unpublished). Fayetteville: University of Arkansas, 1961.

46. DeGood, K. C. "Profile of the Small High School." *Educational Leadership* 18: 180-182; December 1960.

47. Patterson, Harold D. "Relationships Between Size of Secondary School and Selected Teacher Characteristics." Doctoral dissertation (Unpublished). Nashville: George Peabody College for Teachers, 1964.

48. Dawson, Howard A. "What the Rural Elementary School Needs from the Administrative Unit." *National Elementary Principal*, Vol. 29, No. 8, April 1950.

BEST COPY AVAILABLE

BEST COPY AVAILABLE

49. Conant, James B. *The American High School Today*. New York: McGraw-Hill, 1959

50. Hecker, Stanley E. "Early School Leavers in Kentucky." *Bulletin of the Bureau of School Service*. Lexington: College of Education, University of Kentucky, 1953. pp. 1-78.

51. The North Central Association of Colleges and Secondary Schools. *Policies and Criteria for the Approval of Secondary Schools*. Chicago; The Association, 1964. p. 19.

52. Davis, Roy L. "Quality in School Health Administration." *The National Elementary Principal*, Vol. 39, No. 4. February 1960.

53. American Association of School Librarians. *Standards for School Library Programs* Chicago: The Association, 1960.

54. National Council on Schoolhouse Construction. *NCSC Guide for Planning School Plants*. 1964.

55. The Athletic Institute and The American Association for Health, Physical Education and Recreation. *Planning Areas and Facilities for Physical Education and Recreation*. 1965.

56. Knezevich, S. J. "When Are Schools Overcrowded?" *American School Board Journal*, Vol. 134, No. 1, pp. 47-48; January 1957.

57. MacVittie, R. W. "Are Our Elementary Schools Too Large?" *Nation's Schools* 53: 56-57; June 1954.

58. Cornell, Francis G. "High School Size and Building Cost." *American School Board Journal*, Vol. 134, No. 1, pp. 40-42; January 1957.

59. Mays, S. S. "What Size High School?" *American School Board Journal*, Vol. 144, No. 1, pp. 32-33; January 1962.

60. San Antonio Independent School District "The Highlands High School." *American School Board Journal*, Vol. 138, No. 1, pp. 14-16; January 1959.

The following additional references relate specifically to district size in terms of pupil enrollment.

61. Feldt, Leonard S. and Forsythe, Robert. *Norms For School Averages on the Iowa Tests of Educational Development*. Iowa City: Iowa Testing Programs, College of Education, University of Iowa, 1967.

62. Perry, Arthur V. "What Does Research Say About Optimum Size for Secondary Schools?" *Research Digest*, No. 2. Iowa City: The Iowa Center for Research in School Administration, University of Iowa, August 3, 1961.

63. Hutchison, Clayton D., and Munse, Arthur R. "Expenditures for Education in Various Sizes of School Districts." *School Life* 5: 127-128; May 1953.

64. Sollars, Ralph D. "The Relationship of Size of Elementary Schools to Operational Costs and Program Quality." Doctoral dissertation (Unpublished). Columbus: The Ohio State University, 1962.

65. Ohio School Survey Committee. *Report of the Ohio School Survey Committee to the Governor and General Assembly*. Columbus: Heer Printing Co., 1955.

66. Crocker, Jack W. "The Relationship of Size and Organization Type to Certain Factors in Alabama's White Public Junior High School." Doctoral dissertation (Unpublished). Tuscaloosa: University of Alabama, 1960.

67. Tope, Donald E. "Changing Character of the County School Office." *Nation's Schools*, Vol. 52, No. 4, pp. 65-66; October 1953.

BEST COPY AVAILABLE

68. Bohne, Emmitt J. "Criteria for the Size of Local School Administrative Units." Doctoral dissertation (Unpublished). Stanford: Stanford University, 1950.

69. Shold, Walter O. "Alternate Possible Patterns of Development for the Office of the County School Superintendent in Oregon." Doctoral dissertation (Unpublished). Putnam: Washington State University, 1961.

70. McPherran, Archie L. "The Nature and Role of the Intermediate Unit in American Education." Doctoral dissertation (Unpublished). Lincoln: University of Nebraska, 1954.

71. Prentiss, Roy C. "The Relationship Between School District Organization and Public School Housing Needs in Minnesota." Doctoral dissertation (Unpublished). Minneapolis: University of Minnesota, 1954.

72. Cushman, M. L. "The Ideal School District." *Phi Delta Kappan* 32: 313-316; March 1951.

73. National Commission on School District Reorganization. *Your School District*. Washington, D. C.: National Education Association, 1948.